

MASTER GUNNER SCHOOL

M919 Ammunition

In recent weeks the field has had several questions about M919 ammunition. First and foremost M919 ammunition can be fired from any M2 BFV variant regardless of gun type (standard or enhanced). Below are some key points to remember when utilizing M919 ammunition.

Considerations when handling M919 ammunition:

- Use protective gloves
- wash hands thoroughly prior to eating
- dust is most dangerous part of DU

When firing M919 ammunition:

- Use same safety considerations as with all ammunition
- If an in-bore breakup occurs, barrel and breach must be inspected for low-level radiation with an AN/VDR-2 or equivalent

Maintenance Considerations of utilizing M919 ammunition (2408-4)

- EFC is 1 for both barrel and breech assys....M919 burns at 1385mps at muzzle break.
- Re-gauge barrels at 3000 rds as a precaution

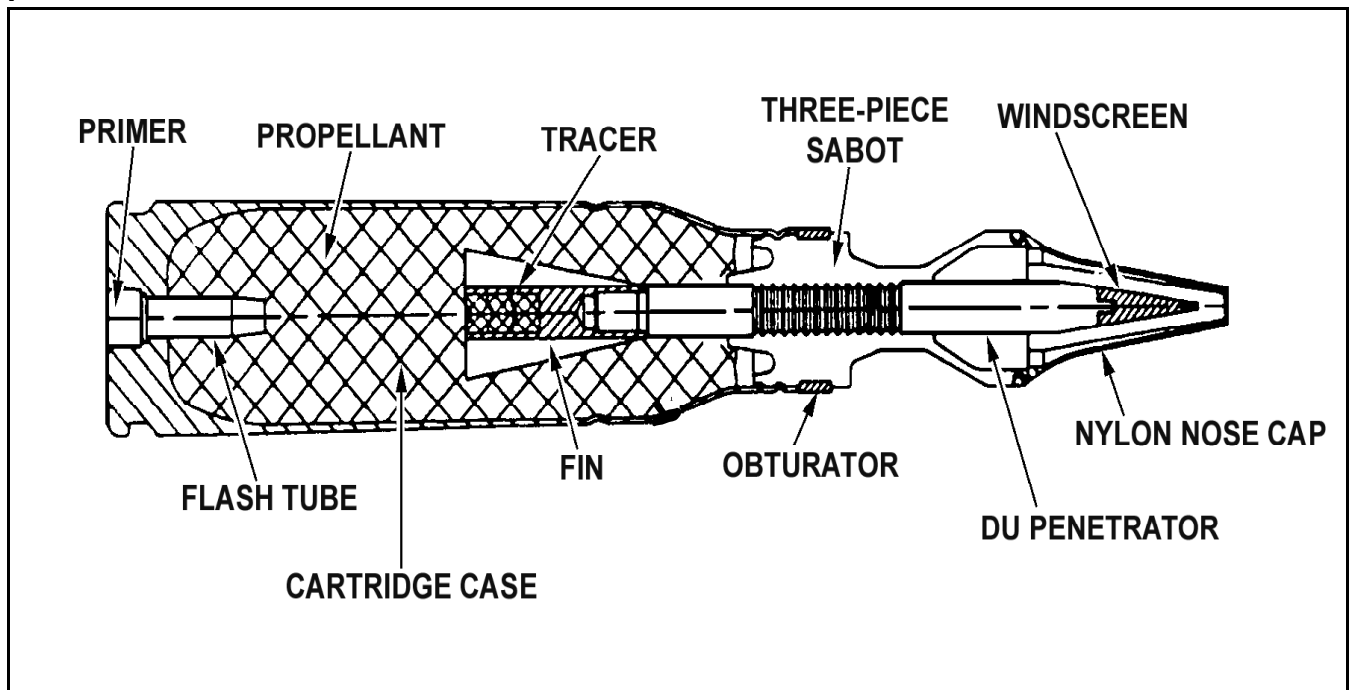
Estimated Barrel Life for Combat Service/Schedule is:

Ammo mix	Chrome Barrel Life	Nitrided Barrel Life
All (AP) M919 or M791	3000 rounds	3000 rounds
75% (AP) M919 or M791 and 25% (HE) M792	7000 rounds	5000 rounds

Ballistic considerations:

- Shorter time to tgt, flatter trajectory, greater trace range.
- time of flight 1000m-.8sec; 1500m-1.2sec; 2000m-1.6 sec; 2500-2.1 tracer burn time 2.1 sec, max effective range 2500m; tracer burn range 2500m. (Refer to FM 23-1 for time of flight for M791 for comparison.)

If the M919 sustains damage, follow handling and reporting procedures in DA message RUEADWD3453, DTG-17051Z MAY 2001 and in the appropriate technical manuals. Additional training and handling procedures are outlined in TRADOC DU Awareness Training, Tier I & IV.



Below is all the information required to construct a Surface Danger Area Diagram for M919 ammunition.

DIMENSIONS FOR M919, APFSDS-T, 25MM							
IMPACT AREA	AREA A	AREA B	AREA W Note 2 Meters	ANGLE Y Z Degrees	DISTANCE X Note 1 Meters	RICOCHET RANGE Meters	15-DEGREE ELEVATION RANGE Meters
Armor	N/A	N/A	1289	26 5	18260	7867	14861
Concrete	N/A	N/A	1289	26 5	18260	7867	14861
Earth	N/A	N/A	801	21 5	18260	7725	14861
Water	N/A	N/A	801	21 5	18260	7725	14861

- Notes:
1. Distance X (maximum range) may be reduced to ricochet range when engaging ground targets at ranges up to 3500 meters from stationary firing positions. When firing from a moving vehicle over level terrain at ground targets up to 3500 meters, use the 15-degree elevation range. When firing on the move over rough terrain use Distance X.
 2. When firing at aerial targets and the gun elevation is greater than 15 degrees, the ricochet area is defined by the Area W and Angle Y is not required.
 3. Area A and Area B, fragmentation areas, are not applicable for the M919, APFSDS-T round, because no significant fragmentation is expected with this round.

Cartridge, M919 APFSDS-T

Muzzle Velocity = 1420 m/s

Table A

MAXIMUM ORDINATE, RANGE AND EFFECT ON RANGE								
1	2	3	4	5	6	7	8	9
ELEVATION QUADRANT	ORDINATE MAXIMUM	RANGE	Range Effects For					
			Muzzle Velocity 1 m/s		Range Wind 1 Knot		Air Density 1 PCT	
			DEC	INC	Head	Tail	DEC	INC
DEG	M	M	M	M	M	M	M	M
5	382.4	10482.4	-8.5	8.1	-6.5	5.4	76.5	-64.4
10	1071.3	13141.2	-9.4	8.9	-12.0	10.9	111.7	-88.2
15	1914.0	14861.0	-10.3	9.7	-16.7	15.5	138.0	104.9
30	5107.9	18260.1	-13.9	13.1	-28.9	27.2	209.1	151.0

Firing Table FT 25-A-2